



Friends of Science in Medicine

Newsletter 21 - 27 April 2019

WHAT'S NEW SINCE OUR LAST NEWSLETTER?

The power of one!

In 2016, with a PhD in bacterial genetics, Natalia Pasternak burst to the forefront of science communication and skepticism in Brazil with two bold initiatives – the organisation of the Brazilian edition of the Pint of Science Festival and, as the main propagator, thanks to her blog Café na Bancada (Coffee on the Lab Bench), of scientific criticism of the [‘miracle cancer pill’ craze](#) which was sweeping across Brazil.



Natalia Pasternak



During the polemic against the ‘pill’, its creator and the politicians who were trying to use it to ingratiate themselves with voters (desperate for a cheap and easy cancer cure), Natalia joined forces with journalists and other concerned scientists. These contacts proved invaluable when she set up of Instituto Questão de Ciência (Question of Science Institute (IQC)).

The University of São Paulo is the largest in Brazil and one of the top-ranked higher education institutions in Latin America. Natalia was invited to speak at [TEDx USP](#), an event hosted by this university, where she castigated Brazilian scientists for their inaction against the advance of Complementary and Alternative Medicine (CAM) in the public health system and of bad science at large.

At that time, there were plans to use the São Paulo planetarium as a launching pad for a new science communication hub of international research, with Natalia as its scientific director. When political uncertainties didn’t allow these plans to come to fruition, Natalia and a group of friends decided to create their own organization – the IQC.

Natalia presented a paper on the [infiltration of CAMs in the Brazilian public health care system](#) at the CSICon in Las Vegas, in October 2018, before returning to Brazil to launch the Institute.

Since then, her tireless efforts through the press about the public investment in CAMs – especially questioning homeopathy – has ruffled quite a few feathers in the alternative medicine establishment, and the ‘News’ website maintained by the IQC has become an important reference for both the public and the media, with more than 50,000 views in the first 3 months.



So well done Natalia. FSM supports your ongoing quest for honesty and scientific evidence in health.



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FSM EXECUTIVE NEWS

Media Release

New Head for Health Watchdog



Ken Harvey

Monash University Associate Professor Ken Harvey AM is the new President of Friends of Science in Medicine. He replaces Professor John Dwyer AO, the founding president.

Friends of Science in Medicine (FSM), founded in 2011, has grown to become a major critic of unscientific health practices and fraudulent health claims. It has advised governments and media, made numerous submissions to enquiries and provided extensive public advice concerning

dubious health claims and practices. It successfully advocated the removal of private health insurance taxpayer-funded rebates from 'natural' therapies that lacked evidence of efficacy.

Professor Harvey said, "Valuing scientific rigor is especially important in an age where unsubstantiated health claims are rampant and scientific consensus is 'imbalanced' by the views of extremists".

FSM campaigns against the unethical promotion of therapeutic goods and services to consumers.

"We critique unproven and exploitive services offered by medical practitioners, such as the infusion of intravenous vitamins and chelation therapy. We are equally concerned about Traditional Chinese Medical Practitioners claiming that acupuncture can treat infertility or Naturopaths advocating homeopathy" said Professor Harvey.



"We encourage tertiary institutions and students of medicine and health sciences to critically appraise therapeutic products and services as part of the courses offered. Complementary medicines provide a fertile field for students to assess the often-outrageous claims made and report regulatory breaches".

Last year, the Therapeutic Goods Advertising Code Council and Complaint Resolution Panel (CRP) were abolished and the Therapeutic Goods Administration (TGA) took over the advertising complaint



system. Health Minister Hunt said these measures, "will enable potential harms from inappropriate advertising to be comprehensively prevented".

"Research by members of FSM, and consumer's lack of trust in the TGA, show that the Minister's assertion

has not been realised", said Professor Harvey.

He concluded, "The critique by Royal Commissioner Haynes on regulatory failure in Australia's financial services industry is equally applicable to the TGA. A failure to enforce the law undermines the authority of the regulator whose fundamental responsibility is to do just that. It also encourages others to break the law, leading to a race to the bottom and consumer detriment. These are important Federal election issues".



Kenneth Haynes



Media Release

Chiropractor regulator lacks backbone

20 February 2018

The internet has led to media being swamped by ‘fake news’ but it has also led to the Australian public being swamped by ‘fake medicine’.

Following widespread alarm at the [video of chiropractor Andrew Arnold manipulating a baby’s spine](#), Friends of Science in Medicine (FSM) has again called for limiting the scope of practice of chiropractors.

FSM is a prominent consumer health watchdog which argues that health treatments advertised to the public and practised on them should be backed by evidence that they are effective and, more importantly, not harmful.

“The treatment demonstrated in the video is nothing more than ludicrous nonsense. It is inappropriate for any chiropractors to be treating infants as this is not without risk of significant harm”, said paediatric expert Professor Don Cameron. “Also, the ‘Activator’ device used by the chiropractor, has no sound scientific basis and is at best, an expensive placebo”.

“Chiropractors continue to pursue expanding their practices into paediatrics, in particular, neonates. The federal government should legislate that no child under 8 years can be treated by chiropractors”, said Professor Alastair MacLennan.

FSM President Dr Ken Harvey repeated his concerns that pseudoscientific, ineffective, dangerous and poorly regulated ‘treatments’ and ‘products’ are increasingly being inflicted on a public that is poorly served by regulators such as the Australian Health Practitioner Regulation Agency (AHPRA) and the Therapeutic Goods Administration (TGA) who are supposed to protect them.

“Why would you want to manipulate the very soft and moveable skull bones of neonates? Repeated requests to AHPRA and the Chiropractic Board to limit the age to protect our babies and children have fallen on deaf ears”, said Professor Harvey.

If the [Victorian Health Minister, Jenny Mikakos is so “outraged”](#), FSM asks her to demand that the Chiropractic Board limit the scope of practice of their registrants and to set a minimum age for their patients.

The Chiropractic Industry— Dr John Cunningham is interviewed by the ABC

FSM in the Media

Rogue chiropractors and medical doctors, CSIRO, Melbourne University, Universal Medicine (UM) and Pete Evans are some of the topics FSM was interviewed or published about since the last newsletter.

Here is a selection of news items:

- * [UM follower's daughter hopes jury verdict stops 'dangerous cult' recruitment](#)
- * [Anti-vax activist charges parents \\$4000 for ‘expert report’](#)
- * [New Head for Health Watchdog](#)
- * [CSIRO profiting from weight loss pill with no scientific backing](#)
- * [Protect our babies and children](#)
- * [Pete Evans’ alkaline Water a ‘ten on the scale of BS’](#)
- * [Banned chiropractor could be treating infants again by 2021](#)
- * [Weight loss warning \(ACA\)](#)
- * [Calls to ban controversial nutritionist from University of Melbourne](#)



FSM's NEW EXECUTIVE MEMBERS



Basia Diug

[A/Prof Basia Diug](#) is the Head of Undergraduate Courses and the Head (Quality and Innovation) of the Medical Education Research and Quality ([MERO](#)) unit at the Monash University School of Public Health & Preventive Medicine. She joined the Monash University, School of Public Health and Preventive Medicine (SPHPM) in 2006.

A/Prof Diug's research in medical education has a strong focus on improving research literacy amongst clinicians. She was the recipient of the 2015 Monash University Vice-Chancellor's Award for Teaching Excellence and a 2015 Monash Education Academy Fellowship. In addition, A/Prof Diug has received recognition for her excellence in teaching, with a national commendation by the Council of Academic

Public Health Institutes Australia for Public Health Teaching Excellence and Innovation in 2014, the 2013 SPHPM Teaching Excellence Award and the 2012 SPHPM Tutoring Excellence Award.

She is the FSM Work Group Co-ordinator for education, health science scepticism and health literacy.



Benson Riddle

[Dr Benson Riddle](#) MBBS, FRACGP is a general practitioner in Sydney. He is also a film maker and the co-founder, director and chief medical officer of start-up '[Alixir Technologies](#)'.

He is passionate about bringing strategic and ethical artificial intelligence into the health care system to foster a more efficient system with better patient outcomes.

Dr Riddle is the Work Group Co-ordinator for General Practice, and has a strong interest in preventive medicine and the fight against 'integrative' medicine.

FSM's CONSULTANTS



Prof John Dwyer



Prof Alastair MacLennan



Prof Marcello Costa

The incoming President thanks Professors Dwyer (Immunologist), MacLennan (Gynaecologist & Obstetrician) and Costa (Neurophysiologist) for their energy and commitment to FSM that has resulted in so many achievements in the past seven years. FSM is delighted that they have all agreed to stay on as 'Consultants' in their areas of expertise, to support our work well into the future.





Pharmacy and CAM

Column by Ian Carr

Science in Pharmacy?



Comedian Jimmy Carr (no relation) has a gag in which he asks his audience “Does anyone here believe in ghosts?” A good portion holler back “YES!” Says Jimmy: “It’s actually easy to tell if your house is haunted... (pause for effect) ... It’s not. Grow up.”



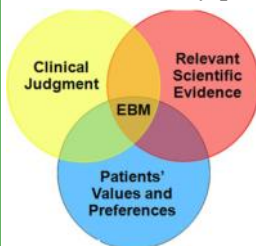
Ian Carr

If only it were as easy for us FSMers to skewer the nonsense and anti-science which pervades the public conversation about Medicine in this age of Dr Oz and Dr Google.

On the SBS program *Insight* last month, FSM President Ken Harvey argued strongly for greater oversight of the vitamin industry and its claims which are invariably over-hyped and often smack of outright fraud. As usual, calls for commonsense and appropriate regulation were ‘balanced’ by little more than personal anecdote. TV prefers soap opera to science any day.



As a community pharmacist committed to the concept of ‘evidence-based medicine’, I am disappointed at the jarring inconsistency between the excellent science training received by recent Pharmacy graduates and the sad fact that the ethics of the profession have been compromised by association with the supplement purveyors.



How can we expect to raise our patients’ health literacy if we allow the employment of naturopaths in pharmacy, flogging nonsensical concepts including iridology, homeopathy, flower essences and reflexology? How can we, in all conscience, counsel our patients about their very real conditions and real medicines, then direct them to the in-store naturopath for an earful of pre-scientific nonsense?

The ongoing public conversation about science in medicine is difficult. Our opponents are those with vested interests who are evangelists for a dream of ‘holistic wellness’ and physical perfection which, while appealing, is illusory. The science literacy of our populace is appallingly low. Unfiltered bullshit is spewed via every medium. Proper science is reported poorly in the mainstream media – usually a fear/scare story – and the public is unable to discern its veracity.

I am hoping that the next generation of pharmacy students is not only devoted to the evidence cause, but better trained in critical thinking and formally equipped to communicate science, medicine and evidence to the lay public.

As for FSM, let us keep shining that torch into the dark corners. Despite the difficulties, there is an engaged and intelligent audience out there frustrated by the barrage of nonsense and the threatened encroachment of the ‘integrative’ brigade.

Ian J Carr, BPharm MPS, is the Pharmacist/Proprietor at Saxbys Pharmacy, Taree, NSW.

A ‘WIKILEAKS’ FOR DODGY PHARMACY PRACTICES



Attention pharmacy workers!

To gather stories and data about how Complementary Medicines are being managed in Australian pharmacies today, FSM Pharmacy Facilitator, Ian Carr, has set up an email address:

pharmacy.CAM.leaks@gmail.com, where you can share your stories.



General Practice and CAM

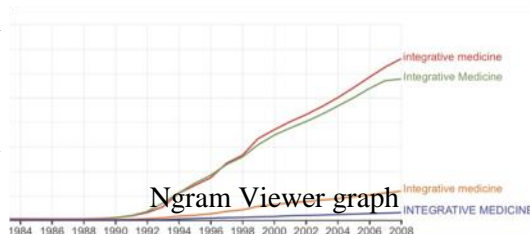
Column by Dr Benson Riddle

Integrative Medicine



Dr Benson Riddle

Integrative Medicine is a term that has not so much crept as stamped into the healthcare and mainstream lexicon. The Ngram Viewer graph—a web application that displays the usage of words or phrases sampled from the millions of books Google has scanned—demonstrates its marked climb since the early 1990s.



But what does this ‘newspeak’ term really mean?

The word *integrative* is an adjective that the Oxford Dictionary defines as the “combining of two or more things to form an effective unit or system”. It derives from the Latin word *integrare*, which means to renew, restore or reinstate. Oxford defines the noun *medicine* as “the science or practice of the diagnosis, treatment, and prevention of disease”. As a term, it defines *integrative medicine* as being “a form of medical therapy that combines practices and treatments from alternative medicine with conventional medicine”.

Turning to those institutions which champion the practice of Integrative Medicine, it is defined by the Australasian Integrative Medicine Association as “a philosophy of healthcare with a focus on individual patient care. It combines the best of conventional western medicine with evidence-based complementary medicine and therapies”; and by the American Board of Integrative Medicine as “the practice of medicine that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, healthcare professionals, and disciplines to achieve optimal health and healing”.

Such definitions therefore assert that conventional medicine does not focus on individual patients, does not focus on the whole person, nor make use of all appropriate therapeutic options. This is indisputably wrong of course, regardless of whether or not every conventional medicine practitioner effectively practises in the way they have most certainly been taught.

It seems the only two things Integrative Medicine actually combines is science with pseudoscience – but as for this forming an “effective unit or system”, for anyone who believes in the concept of science, how could it?

As Marcia Angell and Jerome Kassirer so eloquently wrote in a 1998 *NEJM* editorial, “There cannot be two kinds of medicine — conventional and alternative. There is only medicine that has been adequately tested and medicine that has not, medicine that works and medicine that may or may not work. Once a treatment has been tested rigorously, it no longer matters whether it was considered alternative at the outset.”

Integrative Medicine is a marketing term, pure and simple. Edzard Ernst describes it as “an ill-conceived concept which turns out to be largely about the promotion and use of unproven or disproven therapies.” And it is the failings of conventional medicine to communicate effectively with individual patients—as well as to the public as a whole—that has created the void that the CAM industry is all too willing to fill.

Dr Benson Riddle MBBS, FRACGP, General Practitioner, Sydney



Cancer and CAM

Column by Dr Pallave Dasari

Intravenous Vitamin C for cancer



Dr Pallave Dasari

High-dose intravenous (IV) vitamin C is touted as either a treatment for cancer or as a support for managing the side-effects of chemotherapy/radiation therapy. The evidence for these claims is based on preliminary data which haven't been supported by Phase 3 clinical trials. Despite this, there is widespread administration of IV vitamin C by CAM practitioners. And CAM practitioners charge cancer patients hundreds of dollars per session, despite the limited evidence.

The initial scientific promises of IV vitamin C therapy was based on preclinical data showing high doses of vitamin C slowed growth of cancer cells in petri dishes, and shrank tumours from various cancers in mouse studies. The mechanism of vitamin C was proposed to be the anti-oxidative activity and decreasing blood flow to tumours. IV, rather than oral, administration allowed higher levels of vitamin C to enter the bloodstream.

Whilst the safety profile shows that IV vitamin C is well tolerated in most trials, it is not recommended for particular groups, such as people with pre-existing renal disorders or haemochromatosis.

Randomised, double-blinded, placebo-controlled clinical trials of advanced cancer patients treated orally with high-dose vitamin C showed no difference in cancer symptoms or survival between the groups. However, one clinical study into breast cancer patients undergoing chemotherapy showed that IV vitamin C does manage the side-effects of chemotherapy. The evidence around vitamin C for treating cancer is very limited, having failed early-phase clinical trials. At this time, the US Food and Drug Administration do not approve the use of IV vitamin C for the treatment of cancer. Any claim otherwise is highly irresponsible.

IV vitamin C is yet another false hope from the CAM practitioners who falsely promote the idea that cancer can be treated naturally and with no side-effects. The early evidence to support this idea has not been supported by the results of further clinical trials in humans. Calls of evidence for IV vitamin C and cancer uses either the supportive pre-clinical studies or anecdotal statements. With cancer rates continuing to climb due to an ageing population, smoking, obesity and numerous other factors, there will be more vulnerable people who will spend hundreds of dollars on 'alternative medicines' which will not cure their cancer.



Dr Pallave Dasari, BMedSc, PhD, MSPPM is a Senior Postdoctoral Fellow, Discipline of Surgery, The Queen Elizabeth Hospital and The Robinson Institute, The University of Adelaide, SA.



Therapeutic Goods Administration (TGA) and CAM

Column by Mal Vickers

Easy-Cold-Cash

For the less scrupulous, the common cold is a market opportunity. The [evidence is next to nothing](#) that you can shorten the length of a common cold with substances derived from plants.



One product you may have noticed on your local pharmacy shelf is 'Ease-a-Cold'. At first glance, it looks good, it has 'night and day' formulation. There's also 'Ease-a-Cold for Kids', with colourful packaging. Just take a pill and it'll get rid



Mal Vickers

of my cold (insert the sound of a cash register). Looking in more detail at the Public Summary document for Ease-a-Cold, it contains a mixture: echinacea, zinc, garlic, vitamin C, and more. Checking the scientific literature for trials of Ease-a-Cold finds...nothing.

What isn't known to most consumers is Ease-a-Cold's chequered past. Originally it was produced by Pan Pharmaceuticals; they went bust in 2003. Pharmacare Pty Ltd took over the product. The (now abolished) Complaints Resolution Panel (CRP) published 6 determinations about Ease-a-Cold where it found a breach of advertising law had occurred. The first breach was back in 2005. The advertising for Ease-a-Cold was found to be misleading – not once, but four times – and Pharmacare was asked to withdraw advertisements on six occasions.

On two occasions, the CRP were so frustrated by the repeated breaching of the law that they notified the advertiser that the matter [was being referred to the Therapeutic Goods Administration \(TGA\) for enforcement](#). One complaint, lodged in 2016, was sent directly to the TGA, as the CRP didn't want to waste any more time on it.

Pharmacare persistently pushed back against regulation. They did make minor changes to the advertising from time to time, but the product stayed on the market. Reading the decisions of the CRP, it's clear that the panel knew that the product lacked supporting evidence for the claim that it could actually ease a cold. All the while, the TGA were silent. So, what eventually happened?

Well...nothing.

The TGA now looks after consumer complaints about advertising therapeutic goods. In a recent decision regarding Ease-a-Cold, Pharmacare once again made a minor change to its advertising, changing '[scientifically formulated](#) to shorten your cold' to '[specifically formulated](#) to shorten your cold'. The [TGA were satisfied with this change](#) despite the lack of evidence that the ingredients in this product shortens the duration of colds! But consumers can rest assured – save your cash, as it doesn't ease your cold.

Mal Vickers, Researcher, Monash University School of Public Health.

SPOTTERS WANTED!



Want to be a 'Public Health Activist'? The 'Whack-a-mole (WAM)' project needs your help! Developing university students in critical thinking, research and in understanding our regulatory system, this project needs more advertisements that may be making questionable therapeutic claims.

If you see any therapeutic goods or services making outrageous claims - don't get angry, get emailing! Send the links or copies of advertisements (and where and when they were published) to our CEO, at scienceinmedicine@bigpond.com.



A SPECIAL REPORT FROM EDZARD ERNST

[A 5-year strategy for UK chiropractors: not fit for purpose](#)

The General Chiropractic Council (GCC) is the statutory body regulating all chiropractors in the UK. Their foremost aim, they claim, is to ensure the safety of patients undergoing chiropractic treatment. They also allege to be independent and say they want to protect the health and safety of the public by ensuring high standards of practice in the chiropractic profession.



That sounds good and (almost) convincing.

But is the GCC truly fit for purpose? In a [previous post](#), I found good reason to doubt it.

In a recent [article](#), the GCC claimed that they *started thinking about a new five-year strategy and began to shape four key strategic aims*. So, let's have a look.

Here is the crucial passage:

"A clear strategy is vital but, of course, implementation and getting things changed are where the real work lie. With that in mind, we have a specific business plan for 2019 – the first year of the new strategic plan. You can read it [here](#). This means you'll see some really important changes and benefits including:

- * Promote standards: review and improvements to CPD processes, supporting emerging new degree providers, a campaign to promote the public choosing a registered chiropractor
- * Develop the profession: supporting and enabling work with the professional bodies
- * Investigate and act: a full review of, and changes to, our Fitness to Practice processes to enable a more 'right touch' approach within our current legal framework, sharing more learning from the complaints we receive
- * Deliver value: a focus on communication and engagement, further work on our culture, a new website, an upgraded registration database for an improved user experience.

The changes being introduced, backed by the GCC's Council, will have a positive effect. I know Nick, the new Chief Executive and Registrar and the staff team will make this a success. You as chiropractors also have an important role to play – keep engaging with us and take your own action to develop the profession, share your ideas and views as we transform the organisation, and work with us to ensure we maintain public confidence in the profession of chiropractic."

Am I the only one who finds this more than a little naïve and unprofessional? More importantly, this statement hints at a strategy mainly aimed at promoting chiropractors regardless of whether they are doing more good than harm. This, it seems, is not in line with the GCC's stated aims.

- * How can they already claim that the changes being introduced will have a positive effect?
- * Where in this strategy is the GCC's alleged foremost aim, the protection of the public?
- * Where is any attempt to get chiropractic in line with the principles of EBM?
- * Where is an appeal to chiropractors to adopt the standards of medical ethics?
- * Where is an independent and continuous assessment of the effectiveness of chiropractic?
- * Where is a critical evaluation of its safety?
- * Where is an attempt to protect the public from the plethora of bogus claims made by UK chiropractors?

I feel that, given the recent history of UK chiropractic, these (and many other) points should be essential elements in any long-term strategy. I also feel that this new and potentially far-reaching statement provides little hope that the GCC is on the way towards getting fit for purpose.



RECENT RELEVANT PUBLICATIONS BY FRIENDS

'The Bitter Pill' - Australasian Science

- * Mal Vickers [Therapeutic Goods Administration Challenged to Do Its Job](#)
- * Des Wiggins [Does Osteopathy Have Better Scientific Credentials Than Chiropractic?](#)

John Dwyer

- * [Why consumers need better protection from dodgy health care: the case of 'Universal Medicine'](#)

Ken Harvey

- * [40 Years of antibiotic guidelines](#)

Edzard Ernst

- * ['Homeopathic medicine works in cancer treatment' – this paper is seriously upsetting](#)
- * [Acupuncture for children? ... A little critical thinking would not harm!](#)

The Conversation

- * [Putting babies under general anaesthetic won't affect their development, new research shows](#)

Australian Skeptics

- * [Aust Skeptics Campaigns and Investigations—Have your say](#)

Forbes

- * Steven Salzberg: [Russian Homeopathy, Hiding In Plain Sight](#)
- * Steven Salzberg: [Enjoy That Morning Brew: It Might Be Going Extinct](#)

Science-based Medicine

- * [FDA promises industry-friendly “modernization” of dietary supplement regulation](#)
- * [The Myth of Vaccine Shedding](#)
- * [Do custom-compounded pain creams actually work?](#)
- * [Caffeine Withdrawal Headaches](#)
- * [Why I Quit My Massage Therapy Career](#)
- * [Australia's Chiropractic Board bans spinal manipulation for children under two pending evidence review](#)

Respectful Insolence (David Gorski)

- * [Do medical errors really kill a quarter of a million people a year in the US? \(2019 edition\)](#)
- * [A horrifyingly unethical study of chiropractic treatment of infants with torticollis](#)
- * [MMR vaccination is not associated with autism, take ∞](#)

Good Thinking Society (UK)

- * [Charity Commission releases new guidance on CAM charities](#)

Skeptical Raptor

- * [Measles prevents cancer? Another anti-vaccine myth with no evidence](#)
- * [Measles complications – why the MMR vaccine is so important to children](#)



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Friends of Science in Medicine

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